I.B.2.N.a.100. QUERCUS VELUTINA - QUERCUS ALBA - (QUERCUS COCCINEA) FOREST ALLIANCE

Black Oak - White Oak - (Scarlet Oak) Forest Alliance

Physiognomic Class	Forest (I)
Physiognomic Subclass	Deciduous Forest (I.B.)
Physiognomic Group	Cold-deciduous forest (I.B.2.)
Physiognomic Subgroup	Natural/Semi-natural (I.B.2.N.)
Formation	Lowland or submontane cold-deciduous forest (I.B.2.N.a.)

Alliance **QUERCUS VELUTINA – QUERCUS ALBA - (QUERCUS COCCINEA) FOREST ALLIANCE (I.B.2.N.a.100.)**

Quercus coccinea - Quercus velutina / Sassafras albidum / Vaccinium pallidum Forest

Scarlet Oak - Black Oak / Sassafras / Hillside Blueberry Forest

Coastal Oak - Heath Forest

CLASSIFICATION CONFIDENCE LEVEL: 2

USFS WETLAND SYSTEM: N/A

RANGE:

Fire Island National Seashore

This vegetation is confined to the William Floyd Estate where it comprises most of the upland forest vegetation.

Globally

Coast and near-coast areas from New England and New Jersey.

ENVIRONMENTAL SETTING:

Fire Island National Seashore

This community occurs on well-drained sandy loam over sand and gravel outwash deposits on flat terrain.

Globally

This dry oak forest of New England and northeastern coastal plain occurs on rapidly drained, nutrient-poor, sandy or gravelly soils, on till or outwash.

MOST ABUNDANT SPECIES:

Fire Island National Seashore

Stratum	Species
Tree canopy	*Quercus velutina, Quercus alba, Carya tomentosa*
Shrub	*Vaccinium pallidum, Vaccinium corymbosum, Quercus* spp.
Vine / liana	*Smilax rotundifolia*

Globally

Stratum	Species
Tree canopy	*Quercus coccinea, Quercus velutina*
Shrub	*Vaccinium pallidum, Vaccinium angustifolium* and/or *Gaylussaccia baccata*

CHARACTERISTIC SPECIES:

Fire Island National Seashore

Quercus velutina, Carya tomentosa, Vaccinium pallidum

Globally

Quercus coccinea, Quercus velutina, Sassafras albidum, Gaylussacia baccata, Gaultheria procumbens, Carex pensylvanica

VEGETATION DESCRIPTION:

Fire Island National Seashore
The canopy of this vegetation is dominated by *Quercus velutina* and *Q. alba*. *Carya tomentosa* and *Quercus coccinea* are common canopy or subcanopy associates. Other canopy associates may incude*Robinia pseudoacacia, Nyssa sylvatica, Prunus serotina* or *Pinus rigida.* The shrub layer contains *Quercus* species present in the canopy, especially *Q. alba*, with *Sassafras albidum, Vaccinium corymbosum*, and/or *Viburnum dentatum* occurring locally. *Gaylussaccia baccata* is often present in the short shrub layer with considerable cover. Vines, where present, tend to be abundant, especially *Smilax rotundifolia*. The herbaceous layer is generally sparse to absent.

The composition of this association at the William Floyd Estate is quite variable among stands, particularly as one progresses from north to south. A land-use history study of the Floyd Estate (Clark 1986) notes a change in forest composition with both elevation and land use patterns. The highest elevation coincides with the most inland position (15ft above sea level) and also with the oldest forests, those dominated by oaks with a well-developed heath layer and an absence of hickory. The other cover types described by Clark, progressing roughly from inland (and relatively higher elevation) to the bay (and lowest elevation) include oak – locust – hickory, oak – locust – gum, oak – gum – hickory, and gum – sassafras. Two minor types include conifers in the canopy: pine – oak – locust, at about the same position as oak – locust – hickory, and pine – cedar – gum occurring in association with the oak – gum – hickory cover type.

Globally
The canopy is characterized by *Quercus coccinea, Quercus velutina*, and *Quercus alba*, the latter species particularly characteristic of gravel substrates. Other less abundant canopy associates include *Quercus prinus, Betula lenta* and *Ilex opaca* (usually less than 15% cover). *Pinus rigida* is a common associate but occurs at low cover. *Sassafras albidum* may occur in low cover and may indicate influence by coastal (but not maritime) climate where this type occurs in coastal regions. A "lawn-like" dwarf-shrub heath layer dominated by *Vaccinium pallidum, Vaccinium angustifolium* and *Gaylussacia baccata* is characteristic. *Gaylussacia frondosa* also occurs in some stands. The herbaceous layer is typically sparse, with *Carex pensylvanica, Pteridium aquilinum, Gaultheria procumbens* being the most common associates. Herb diversity is greater in small canopy gaps, where *Helianthemum canadense, Lespedeza* spp., *Lechea* spp., and *Arctostaphylos uva-ursi* occur.

COMMENTS:
Fire Island National Seashore
The Floyd Estate has seen vast changes in forest vegetation that have been well documented by Clark (1986). All but the most inland portion of the estate had been cleared of forests by the time the first map had been drawn in 1880. In addition, a fire occurring on the northern and central portion of the estate occurred in 1964. Deer browse is noted in nearly all plots. For these reasons, it is difficult to separate ecological from land-use effects on the vegetation except directly adjacent to the exposed shoreline. We classified all upland forest vegetation at the Willima Floyd Estate, with the exception of the post oak maritime forest, as a single coastal oak – heath association for several reasons: 1) the oldest forest on the estate is the most typical expression of this association; 2) there is significant overlap in species composition in the forest across the estate; and 3) Clark postulates that pine barrens vegetation (and presumably oak – heath vegetation) occupied the site prior to land clearance.

States/Provinces:	CT:S?, MA:S?, NH:S?, NJ:S?, NY:S?, RI:S?
OTHER NOTEWORTHY SPECIES:	
CONSERVATION RANK:	G?
DATABASE CODE:	CEGL006375
MAP UNITS:	FIIS plots 28, 37, 60, 36, 29

REFERENCES:
Breden 1989
Clark 1986
Metzler and Barrett 1996
Reschke 1990
Sperduto 1996